

Remarks

The Office Action dated May 2, 2006 has been carefully reviewed and the following remarks are made in consequence thereof.

Claims 1-27 are pending in this application. Claims 1-27 stand rejected.

The rejection of Claims 1-27 under 35 U.S.C. § 103(a) as being unpatentable over Holtrop (4,476,183) in view of Juriga (5,536,556), further in view of Weber (4,940,629), and further in view of Haussling (4,828,910) is respectfully traversed.

Independent Claim 1 of the present application recites in part "[a] multi-layered fiber reinforced thermoplastic sound absorbing panel comprising: . . . a barrier layer covering said tie layer, said barrier layer comprising a thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material, said tie layer bonding said barrier layer to said core layer . . . ."

Independent Claim 10 of the present application recites in part "[a] composite sheet comprising: . . . a barrier layer covering said second surface of said permeable core . . . ."

Independent Claim 20 recites in part "[a] method of manufacturing a porous fiber-reinforced thermoplastic sheet, said method comprising: . . . bonding a barrier layer to the second surface of the porous fiber-reinforced thermoplastic sheet . . . ."

The Office Action, at page 3, admits that "Holtrop fails to disclose a thermoplastic core layer comprising a thermoplastic material and from about 20 weight percent to about 80 weight percent fibers, a density from about 0.2 gm/cc to about 1.8 gm/cc; a tie layer comprising a thermoplastic material; and a barrier layer comprising thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material".

Also, the Office Action, at page 3 admits that "Weber fails to disclose a tie layer comprising a thermoplastic material; and a barrier layer comprising thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material".

Further, the Office Action, at page 4, admits that "Juriga fails to disclose a barrier layer comprising thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material".

The Office Action, at page 4 suggests that "Haussling discloses a barrier layer (Figure 1, #2) comprising thermoplastic material having a melting temperature higher than the melting temperature of said core layer (3) thermoplastic material (Col.2, Lines 56-68; Col. 4, Lines 27-33)". Applicants respectfully disagree with this suggestion because Haussling describes at Col. 2, lines 23-27, that reference number 2 refers to a fibrous, porous reinforcing mat. Also, Haussling describes at Col. 4 lines 11-14, that "[i]t is also important that mats 2 and 4 be porous to a sufficient degree that they do not act as sound reflectors in the same sense as a sheet of kraft paper, a polymer film or a layer of solid fiberglass reinforced resin". Applicants respectfully submit that one skilled in the art would not consider Haussling's fibrous, porous reinforcing mat 2 a barrier layer. Paragraph 0012 of the present application describes that "[t]he decorative sound absorbing panel is a multi-layer laminate containing an air permeable decorative layer, an air permeable thermoplastic adhesive layer, an air permeable porous fiber reinforced thermoplastic composite layer, a tie layer, an air impermeable barrier layer, and an air permeable fabric layer" (emphasis added). Also, paragraph 0021 describes that "[b]arrier layer 22 can be formed from any suitable non-permeable thermoplastic material having a melting temperature that is significantly higher than the thermoplastic material of core layer 12" (emphasis added).

Accordingly, Applicants submit that Haussling does not teach a multi-layered fiber reinforced thermoplastic sound absorbing panel that includes a barrier layer. Rather, Haussling teaches a fibrous, porous reinforcing mat layer.

At least for the reasons explained above, Holtrop, Weber, Juriga, and Haussling, alone or in combination, do not describe nor suggest a multi-layered fiber reinforced thermoplastic sound absorbing panel as recited in Claim 1, a composite sheet as recited in Claim 10, or a method of manufacturing a porous fiber-reinforced thermoplastic sheet as recited in Claim 20. Particularly, Holtrop, Weber, Juriga, and Haussling, alone or in combination, do not describe nor suggest a multi-layered fiber reinforced thermoplastic sound absorbing panel that includes a barrier layer, a composite sheet that includes a barrier layer, or a method of manufacturing a porous fiber-reinforced thermoplastic sheet that includes bonding a barrier layer to the second surface of the porous fiber-reinforced thermoplastic sheet. As explained above, Haussling teaches a fibrous, porous reinforcing mat layer rather than a barrier layer. Also, the Office Action has admitted that Holtrop, Weber, and Juriga do not disclose a barrier layer. Accordingly, Applicants submit that independent Claim 1, 10, and 20 are patentable over Holtrop, Weber, Juriga, and Haussling, alone or in combination.

Claims 2-9 depend from independent Claim 1, Claims 11-19 depend from independent Claim 10, and Claims 21-27 depend from independent Claim 20. When the recitations of Claims 2-9, Claims 11-19, and Claims 21-27 are considered in combination with Claims 1, 10, and 20 respectively, Applicants respectfully submit that dependent Claims 2-9, 11-19, and 21-27 likewise are patentable over Holtrop, Weber, Juriga, and Haussling, alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 1-27 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

A handwritten signature in cursive script, reading "Michael Tersillo". The signature is written in dark ink and is positioned above a horizontal line.

Michael Tersillo  
Registration No. 42,180  
ARMSTRONG TEASDALE LLP  
One Metropolitan Square, Suite 2600  
St. Louis, Missouri 63102-2740  
(314) 621-5070